



Dallas

MATERIALS SAFETY DATA SHEET

- PRODUCT IDENTIFICATION
- HAZARDOUS COMPONENTS
- PHYSICAL DATA
- FIRE AND EXPLOSION HAZARD DATA
- HEALTH HAZARD DATA
- REACTIVITY DATA
- SPILL AND DISPOSAL PROCEDURES
- PORTECTIVE EQUIPMENT
- STORAGE AND HANDLING PRECAUTIONS
- TRANSPORTATION DATA AND ADDITTIONAL INFORMATION

1. PRODUCT IDENTIFICATION

PRODUCT NAME	LIVEROOLII ORIO AOID		
		HYDROCHLORIC ACID	
FORMULA	HCL	HCL	
FORMULA WT	36.46		
CAS NO.	7647-01-0		
NIOSH/RTECS NO.	MW4025000		
COMMON SYNONYMS	MURIATIC ACID; CHLOROHYDF	RIC ACID; HYDROCHLORIDE	
PRODUCT CODES	9543,9539,9535,5367,9534,954	9543,9539,9535,5367,9534,9544,9529,9542,4800,9549,9530,9548 9540,9547,9546,9537	
EFFECTIVE	08/07/86	08/07/86	
REVISION #	02	02	
PRECAUTIONARY LABELLING	BAKER SAF-T-DATA(TM) SYSTEM		
	HEALTH	3 - SEVERE(POISON)	
	FLAMMIBILITY	0 - NONE	
	REACTIVITY	2 - MODERATE	
	CONTACT	3 - SEVERE(CORROSIVE)	
	HAZARD RATINGS ARE 0 TO 4	4 (0 = NO HAZARD; 4 = EXTREME HAZARD)	
LABORATORY PROTECTIVE EQUIPMENT	GOGGLES & SHIELD; LAB COA	GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES	
PRECAUTIONARY LABEL STATEMENTS	DO NOT GET IN EYES, ON SKI DAMAGE TO RESPIRATORY S CLOSED CONTAINER. LOOSEI VENTILATION. WASH THOROL	POISON DANGER CAUSES SEVERE BURNS MAY BE FATAL IF SWALLOWED OR INHALED DO NOT GET IN EYES, ON SKIN, ON CLOTHING. DO NOT BREATHE VAPOR. CAUSES DAMAGE TO RESPIRATORY SYSTEM (LUNGS), EYES AND SKIN. KEEP IN TIGHTLY CLOSED CONTAINER. LOOSEN CLOSURE CAUTIOUSLY. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING. IN CASE OF SPILL NEUTRALIZE WITH SODA ASH OR LIME AND PLACE IN DRY CONTAINER.	
SAF-T-DATA(TM) STORAGE COLOR CODE	WHITE (CORROSIVE)	WHITE (CORROSIVE)	

2. HAZARDOUS COMPONENTS

COMPONENT	%	CAS NO.
HYDROCHLORIC ACID	35-40	7647-01-0

3. PHYSICAL DATA

BOILING POINT	110°C (230°F)
VAPOR PRESSURE(MM HG)	N/A
MELTING POINT	-25°C(-13°F)
VAPOR DENSITY(AIR=1)	1.3
SPECIFIC GRAVITY(H ₂ 0)	1.19
EVAPORATION RATE(BUTYL ACETATE=1)	N/A
SOLUBILTY(H ₂ O)	COMPLETE(IN ALL PROPORTIONS)
% VOLATILES BY VOLUME	100
APPEARANCE & ODOUR	CLEAR,COLORLESS OR SLIGHTLY YELLOW,PUNGENT,FUMING LIQIUD

4. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (CLOSED CUP)	N/A
NFPA 704M RATING	3-0-0
FLAMMABLE LIMITS	UPPER - N/A % LOWER-N/A %
FIRE EXTINGUISHING MEDIA	USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.
	FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN POSITIVE PRESSURE MODE. MOVE CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL. DO NOT GET WATER INSIDE CONTAINERS.
UNUSUAL FIRE & EXPLOSION HAZARDS	MAY EMIT HYDROGEN GAS UPON CONTACT WITH METAL.
TOXIC GASES PRODUCED	HYDROGEN CHLORIDE,HYDROGEN GAS

5. HEALTH HAZARD DATA

PEL AND TLV LISTED DENOTE CEILING LIMITS	
THRESHOLD LIMIT VALUE (TLV/TWA)	7 MG/M3 (5 PPM)
PERMISSILBLE EXPOSURE LIMIT (PEL)	7 MG/M3 (5 PPM)
TOXICITY	LD50 (ORAL-RABBIT) (MG/KG)- 900
	LD50 (IPR-MOUSE) (MG/KG)- 40
	LC50 (INHL-RAT-1H) (PPM)- 3124
CARCINOGENICITY	NTP: NO,IARCNO
	Z LIST: NO,OSHA REG:NO
EFFECTS OF OVER EXPOSURE	INHALATION OF VAPORS MAY CAUSE PULMONARY EDEMA, CIRCULATORY SYSTEM COLLAPSE, DAMAGE TO UPPER RESPIRATORY SYSTEM, COLLAPSE. INHALATION OF VAPORS MAY CAUSE COUGHING AND DIFFICULT BREATHING. LIQUID MAY CAUSE SEVERE BURNS TO SKIN AND EYES. INGESTION IS HARMFUL AND MAY BE FATAL.INGESTION MAY CAUSE SEVERE BURNING OF MOUTH AND STOMACH. INGESTION MAY CAUSE NAUSEA AND VOMITING.
TARGET ORGANS	RESPIRATORY SYSTEM,EYES,SKIN
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE	NONE IDENTIFIED
ROUTES OF ENTRY	INGESTION,INHALATION,SKIN CONTACT,EYES CONTACT
EMERGENCY AND FIRST AID PROCEDURES	CALL A PHYSICIAN. IF SWALLOWED, DO NOT INDUCE VOMITING; IF CONSCIOUS, GIVE WATER, MILK, OR MILK OF MAGNESIA. IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE RE-USE.

6. REACTIVITY DATA

STABILITY	STABLE
HAZARDOUS POLYMERIZATION	WILL NOT OCCUR
CONDITIONS TO AVOID	HEAT,MOISTURE
	MOST COMMON METALS, WATER, AMINES, METAL OXIDES, ACETIC ANHYDRIDE, PROPIOLACTONE, VINYL ACETATE, MERCURIC SULFATE, CALCIUM PHOSPHIDE, FORMALDEHYDE, ALKALIES, CARBONATES, STRONG BASES, SULFURIC ACID, CHLOROSULFONIC ACID
DECOMPOSITION PRODUCTS	HYDROGEN CHLORIDE,HYDROGEN,CHLORINE

7. SPILL AND DISPOSAL PROCEDURES

DISCHARGE	WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. STOP LEAK IF YOU CAN DO SO WITHOUT RISK. VENTILATE AREA. NEUTRALIZE SPILL WITH SODA ASH OR LIME. WITH CLEAN SHOVEL, CAREFULLY PLACE MATERIAL INTO CLEAN, DRY CONTAINER AND COVER; REMOVE FROM AREA. FLUSH SPILL AREA WITH WATER.J. T. BAKER NEUTRASORB(R) OR NEUTRASOL(R) "LOW NA+" ACID NEUTRALIZERS ARE RECOMMENDED FOR SPILLS OF THIS PRODUCT.
DISPOSAL PROCEDURES	DISPOSE IN ACCORDANCE OF ALL APPLICABLE FEDERAL,STATE,AND LOCAL ENVIRONMENTAL REGULATIONS
EPA HAZARDOUS WASTE NUMBER	D002 (CORROSIVE WASTE)

8. PROTECTIVE EQUIPMENT

VENTILATION	USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.
RESPIRATORY PROTECTION	RESPIRATORY PROTECTION REQUIRED IF AIRBORNE CONCENTRATION EXCEEDS
	TLV. AT CONCENTRATIONS UP TO 100 PPM, A CHEMICAL CARTRIDGE RESPIRATOR
	WITH ACID CARTRIDGE IS RECOMMENDED. ABOVE THIS LEVEL, A SELF-CONTAINED
	BREATHING APPARATUS IS ADVISED.
EYE/SKIN PROTECTION	SAFETY GOGGLES AND FACE SHEILD,UNIFORM,PROTECTIVE SUIT,ACID-RESISTANT
	GLOVES ARE RECOMMENDED.

9. STORAGE AND HANDLING PRECAUTIONS

SAF-T-DATA(TM) STORAGE COLOR CODE	WHITE
SPECIAL PRECAUTIONS	KEEP CONTAINER TIGHTLY CLOSED. STORE IN CORROSION-PROOF AREA. ISOLATE
	FROM INCOMPATIBLE MATERIALS. DO NOT STORE NEAR OXIDIZING MATERIALS.

10. TRANSPOTATION DATA AND ADDITIONAL INFORMATION

DOMESTIC (D.O.T)	
PROPER SHIPPING NAME	HYDROCHLORIC ACID
HAZARD CLASS	CORROSIVE MATERIAL (LIQIUD)
UN/NA	UN1789
LABELS	CORROSIVE
REPORTABLE QUANTITY	5000 LBS
	INTERNATIONAL (I.M.O.)
PROPER SHIPPING NAME	HYDROCHLORIC ACID,SOLUTION
HAZARD CLASS	8
UN/NA	UN1789
LABELS	CORROSIVE

